



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

November 4, 2009

Mr. Gerardo Rios ([R9AirPermits\\_SC@epa.gov](mailto:R9AirPermits_SC@epa.gov))  
Chief, Permits Office  
U.S. EPA, Region IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

SUBJECT: City of Riverside Public Utilities Department, Emergency Black Start Engine Installation,  
Facility ID No. 139796, Facility Location: Riverside Energy Resource Center,  
5901 Payton Avenue, Riverside, CA

Dear Mr. Rios:

The South Coast Air Quality Management District (AQMD) has received and reviewed a permit application for the subject facility. The City of Riverside is proposing to an emergency diesel-fueled black start engine, rated at 1502 bhp to their existing power plant located at the Riverside Energy Resource Center, at 5901 Payton Avenue, in the City of Riverside. This engine will operate no more than 200 hours per year for emergency purposes that includes no more than 50 hours per year for testing and maintenance.

The AQMD is required under Rule 3005(e) to provide a copy of the proposed de minimis significant Title V revision permit to the EPA Administrator for a 45-day review. As such, a copy of the proposed revision to the existing Title V permit is attached along with our engineering analysis for your review.

If you wish to provide comments or have any questions regarding this project, please contact Mr. Marcel Saulis at (909) 396-3093/ [msaulis@aqmd.gov](mailto:msaulis@aqmd.gov) or Mr. John Yee at (909) 396-2531/ [jyee@aqmd.gov](mailto:jyee@aqmd.gov).

Sincerely,

Michael D. Mills, P.E.  
Senior Manager  
Engineering and Compliance

MDM  
Enclosures  
(usepa)

*Cleaning the air that we breathe...*



## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
<b>System 1 : GAS TURBINES, POWER GENERATION</b>					
GAS TURBINE, NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000 PC SPRINT, SIMPLE CYCLE, WITH WATER INJECTION, 490 MMBTU/HR WITH A/N: 426694 Permit to Construct Issued: 04/29/05	D1	C3	NOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; CO: 6 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]  NOX: 2.5 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; NOX: 106 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,7-8-2004]  NOX: 17.18 LBS/MMSCF NATURAL GAS (1) [RULE 2012,12-5-2003] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978]  PM: 0.01 GRAINS/SCF (5) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 0.1 GRAINS/SCF (5A) [RULE 409,8-7-1981]  SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,7-8-2004]	A63.1, A63.2, A99.1, A99.2, A99.3, A195.1, A195.2, A195.4, A327.1, C1.1, C1.2, D12.1, D29.1, D29.2, D29.3, D82.1, D82.2, E193.1, I296.1, K40.1, K67.1

\* (1)(1A)(1B) Denotes RECLAIM emission factor  
(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
(9) See App.B for Emission Limits  
(2)(2A)(2B) Denotes RECLAIM emission rate  
(4) Denotes BACT emission limit  
(6) Denotes air toxic control rule limit  
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.)  
(10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
GENERATOR, 49.8 MW				VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	
SELECTIVE CATALYTIC REDUCTION, NO. 1, CORMETECH, 1227 CU.FT.; WIDTH: 8 FT 9.6 IN; HEIGHT: 6 FT 6 IN; LENGTH: 2 FT 7.2 IN. WITH A/N: 426696 Permit to Construct Issued: 04/29/05 AMMONIA INJECTION, GRID	C2	C3 S4		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.3, D12.2, D12.3, D12.4, E179.1, E179.2
CO-OXIDATION CATALYST, ENGLEHARD, INC, PLATINUM-ON-ALUMINA, 82 CU.FT; HEIGHT: 2 FT 4 IN; WIDTH: 2 FT 0 IN; DEPTH: 0 FT 3 IN A/N: 426696 Permit to Construct Issued: 04/29/05	C3	D1 C2			
STACK, NO. 1, HEIGHT: 80 FT; DIAMETER: 13 FT A/N: 426694 Permit to Construct Issued: 04/29/05	S4	C2			

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
(9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate  
(4) Denotes BACT emission limit  
(6) Denotes air toxic control rule limit  
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)  
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- \*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
<b>System 2 : GAS TURBINES, POWER GENERATION</b>					
GAS TURBINE, NO.2, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000 PC SPRINT, SIMPLE CYCLE, WITH WATER INJECTION, 490 MMBTU/HR WITH: A/N: 426695 Permit to Construct Issued: 04/29/05	D5	C7	NOX: MAJOR SOURCE**	CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; CO: 6 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]  NOX: 2.5 PPMV NATURAL GAS (4) [RULE 2005,4-20-2001] ; NOX: 106 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,7-8-2004]  NOX: 17.18 LBS/MMSCF NATURAL GAS (1) [RULE 2012,12-5-2003] ; PM: 11 LBS/HR (5B) [RULE 475,10-8-1976;RULE 475,8-7-1978]  PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: 0.01 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978]  SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SOX: 150 PPMV NATURAL GAS (8) [40CFR 60 Subpart GG,7-8-2004]	A63.1, A63.2, A99.1, A99.2, A99.3, A195.1, A195.2, A195.4, A327.1, C1.1, C1.2, D12.1, D29.1, D29.2, D29.3, D82.1, D82.2, E193.1, I296.2, K40.1, K67.1

- \* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate  
(3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
(5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
(7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)  
(9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements
- \*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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<b>Process 1 : INTERNAL COMBUSTION</b>					
GENERATOR, 49.8 MW				VOC: 2.PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	
SELECTIVE CATALYTIC REDUCTION, NO. 2, CORMETECH, 1227 CU.FT.; WIDTH: 8 FT 9.6 IN; HEIGHT: 6 FT 6 IN; LENGTH: 2 FT 7.2 IN WITH A/N: 426697 Permit to Construct Issued: 04/29/05 AMMONIA INJECTION, GRID	C6	S8		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.3, D12.2, D12.3, D12.4, E179.1, E179.2
CO OXIDATION CATALYST, ENGLEHARD, INC, PLATINUM-ON-ALUMINA, 82 CU FT; HEIGHT: 2 FT 4 IN; WIDTH: 2 FT 0 IN; DEPTH: 0 FT 3 IN A/N: 426697 Permit to Construct Issued: 04/29/05	C7	D5 S8			
STACK, NO. 2, HEIGHT: 80 FT; DIAMETER: 13 FT A/N: 426695 Permit to Construct Issued: 04/29/05	S8	C6 C7			

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
(9) See App B for Emission Limits  
(2)(2A)(2B) Denotes RECLAIM emission rate  
(4) Denotes BACT emission limit  
(6) Denotes air toxic control rule limit  
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
(10) See Section J for NESHAP/MACT requirements

\*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
<b>System 3 : GAS TURBINES, POWER GENERATION</b>					
GAS TURBINE, NO. 3, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000 PC SPRINT, SIMPLE CYCLE, HEAT INPUT REFERENCED AT 100 DEGREES F, WITH WATER INJECTION, 490 MMBTU/HR A/N: 481647 Permit to Construct Issued: 06/19/09	D16	C18	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 4 PPMV NATURAL GAS (4) [RULE 1703(a)(2) -PSD -BACT,10-7-1988]  NOX: 12.5 LBS/MMSCF NATURAL GAS (2A) [RULE 2012,5-6-2005] ; NOX: 2.3 PPMV NATURAL GAS (4) [RULE 1703(a)(2) -PSD-BACT,10-7-1988]  NOX: 25 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK,7-6-2006] ; NOX: 96.66 LBS/MMSCF NATURAL GAS (1) [RULE 2012,5-6-2005]  PM: 0.01 GRAINS/SCF NATURAL GAS (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978] ; PM: 0.1 GRAINS/SCF NATURAL GAS (5B) [RULE 407,4-2-1982]	A63.3, A63.4, A63.5, A99.4, A99.5, A99.6, A99.7, A195.4, A195.5, A195.6, A327.1, A433.1, A433.2,  C1.3, C1.4, D12.1, D29.4, D29.5, D29.6, D82.3, D82.4, E193.2, H23.1, I296.3, K40.1, K67.1

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
 (3) Denotes RECLAIM concentration limit  
 (5)(5A)(5B) Denotes command and control emission limit  
 (7) Denotes NSR applicability limit  
 (9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate  
 (4) Denotes BACT emission limit  
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
				<b>PM: 11 LBS/HR.NATURAL GAS (5) [RULE 475,10-8-1976;RULE 475,8-7-1978] ;</b> <b>PM10: 6.42 LBS/MMSCF NATURAL GAS (7) [RULE 1303(b)(2)-Offset,5-10-1996</b>  <b>RULE 1303(b)(2)-Offset,12-6-2002] ; SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ;</b> <b>SOX: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK,7-6-2006]</b>  <b>VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]</b>	
GENERATOR, 49.8 MW A/N: 481647 Permit to Construct Issued: 06/19/09	B17				
CO OXIDATION CATALYST, BASF CATALYST LLC, PLATINUM AND ALUMINA, MODEL CANMET, 90 CU FT; HEIGHT: 2 FT 4 IN; WIDTH: 2 FT 0 IN; DEPTH 0 FT 3 IN A/N: 481651 Permit to Construct Issued: 06/19/09	C18	D16 C19			

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
(9) See App B for Emission Limits
- (2)(2A)(2B) Denotes RECLAIM emission rate  
(4) Denotes BACT emission limit  
(6) Denotes air-toxic control rule limit  
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
(10) See Section J for NESHAP/MACT requirements
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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
SELECTIVE CATALYTIC REDUCTION, NO. 3, CORMETECH, 1024 CU.FT.; WIDTH: 8 FT 11.6 IN; HEIGHT: 6 FT 5 IN; LENGTH: 3 FT 2 IN A/N: 481651 Permit to Construct Issued: 06/19/09	C19	C18 S21		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.7, D12.4, D12.5, D12.6, E179.1, E179.2, E193.2
STACK, NO. 3, HEIGHT: 80 FT; DIAMETER: 13 FT A/N: 481647 Permit to Construct Issued: 06/19/09	S21	C19			
<b>System 4 : GAS TURBINES, POWER GENERATION</b>					
GAS TURBINE, NO. 4, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000 PC SPRINT, SIMPLE CYCLE, HEAT INPUT REFERENCED AT 100 DEGREES F, WITH WATER INJECTION, 490 MMBTU/HR A/N: 481649 Permit to Construct Issued: 06/19/09	D22	C24	NOX: MAJOR SOURCE**	CO: 2000 PPMV NATURAL GAS (5) [RULE 407,4-2-1982] ; CO: 4 PPMV NATURAL GAS (4) [RULE 1703(a)(2) -PSD-BACT,10-7-1988]  NOX: 12.5 LBS/MMSCF NATURAL GAS (1A) [RULE 2012,5-6-2005] ; NOX: 2.3 PPMV NATURAL GAS (4) [RULE 1703(a)(2) -PSD-BACT,10-7-1988]  NOX: 25 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK,7-6-2006] ; NOX: 96.66 LBS/MMSCF NATURAL GAS (1) [RULE 2012,5-6-2005]	A63.3, A63.4, A63.5, A99.4, A99.5, A99.6, A99.7, A195.4, A195.5, A195.6, A327.1, A433.1, A433.2,  C1.3, C1.4, D12.1, D29.4, D29.5, D29.6, D82.3, D82.4, E193.2, H23.1, I296.3, K40.1, K67.1

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
(9) See App B for Emission Limits  
(2)(2A)(2B) Denotes RECLAIM emission rate  
(4) Denotes BACT emission limit  
(6) Denotes air toxic control rule limit  
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS, etc.)  
(10) See Section J for NESHAP/MACT requirements
- \*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions:* And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
				<p>PM: 0.01 GRAINS/SCF  NATURAL GAS (5A) [RULE 475,10-8-1976;RULE 475,8-7-1978]  ; PM: 0.1 GRAINS/SCF  NATURAL GAS (5B) [RULE 409,8-7-1981]</p> <p>PM: 11 LBS/HR NATURAL GAS (5) [RULE 475,10-8-1976;RULE 475,8-7-1978] ;  PM10: 6.42 LBS/MMSCF  NATURAL GAS (7) [RULE 1303(b)(2)-Offset,5-10-1996  RULE 1303(b)(2)-Offset,12-6-2002] ; SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ;  SOX: 0.06 LBS/MMBTU  NATURAL GAS (8) [40CFR 60 Subpart KKKK,7-6-2006]</p> <p>VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]</p>	
GENERATOR, 49.8 MW A/N: 481649 Permit to Construct Issued: 06/19/09	B23				

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
CO OXIDATION CATALYST, BASF CATALYST LLC, PLATINUM AND ALUMINUM, MODEL CANMET, 90 CU FT; HEIGHT: 2 FT 4 IN; WIDTH: 2 FT 0 IN; DEPTH: 0 FT 3 IN A/N: 481650 Permit to Construct Issued: 06/19/09	C24	D22 C25			
SELECTIVE CATALYTIC REDUCTION, NO. 4, CORMETECH, 1024 CU FT; WIDTH: 8 FT 11.6 IN; HEIGHT: 6 FT 5 IN; LENGTH: 3 FT 2 IN A/N: 481650 Permit to Construct Issued: 06/19/09	C25	C24 S27		NH3: 5 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(a)(1)-BACT,12-6-2002]	A195.7, D12.4, D12.5, D12.6, E179.1, E179.2, E193.2
STACK, NO. 4, HEIGHT: 80 FT; DIAMETER: 13 FT A/N: 481649 Permit to Construct Issued: 06/19/09	S27	C25			
<b>System 5 : EMERGENCY IC ENGINE</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, CATERPILLAR, MODEL C32 DITA, WITH AFTERCOOLER, TURBOCHARGER, 1502 BHP A/N:	D28			CO: 2.6 GRAM/BHP-HR DIESEL (8) [40CFR 60 Subpart III,7-11-2006] ; CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1703(a)(2) -PSD-BACT,10-7-1988]	C1.5, C1.6, D12.7, D12.8, E193.3, E193.4, I296.4, K67.3, K67.4

- \* (1)(1A)(1B) Denotes RECLAIM emission factor  
 (3) Denotes RECLAIM concentration limit  
 (5)(5A)(5B) Denotes command and control emission limit  
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 (9) See App. B for Emission Limits
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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
				CO: 2.6 GRAM/BHP-HR DIESEL (5) [RULE 1470,6-4 – 2007] ; NOX: 175 LBS/1000 GAL DIESEL (1) [RULE 2012,5-6-2005] ; NOX + ROG: 4.8 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT,5-10-1996  RULE 1303(a)(1)-BACT,12-6 – 2002;RULE 1703(a)(2) –PSD – BACT,10-7-1988] ; NOX + ROG: 4.8 GRAM/BHP-HR DIESEL (5) [RULE 1470,6-4 – 2007]  NOX + ROG: 4.8 GRAM/BHP-HR DIESEL (8) [40CFR 60 Subpart III,7-11-2006] ; PM: 0.15 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT,5-10-1996  RULE 1303(a)(1)-BACT,12-6 – 2002] ; PM: 0.15 GRAM/BHP-HR DIESEL (5) [RULE 1470,6-4-2007]	
FILTER, DIESEL PARTICULATE, JOHNSON MATTHEY, MODEL CRT, WITH BACKPRESSURE AND TEMPERATURE DATA LOGGING AND ALARM SYSTEM A/N:	B29				

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(3) Denotes RECLAIM concentration limit  
(5)(5A)(5B) Denotes command and control emission limit  
(7) Denotes NSR applicability limit  
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- (2)(2A)(2B) Denotes RECLAIM emission rate  
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### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
<b>Process 1 : INTERNAL COMBUSTION</b>					
GENERATOR, 1000 KW A/N:	B30				
<b>Process 2 : AMMONIA STORAGE</b>					
STORAGE TANK, FIXED ROOF, AQUEOUS AMMONIA 19 PERCENT, WITH A VAPOR RETURN LINE, 12000 GALS A/N: 426698 Permit to Construct Issued: 04/29/05	D11				C157.1, E144.1, E193.1

- \* (1)(1A)(1B) Denotes RECLAIM emission factor (2)(2A)(2B) Denotes RECLAIM emission rate  
 (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit  
 (5)(5A)(5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit  
 (7) Denotes NSR applicability limit (8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
 (9) See App B for Emission Limits (10) See Section J for NESHAP/MACT requirements
- \*\* Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

**FACILITY PERMIT TO OPERATE  
CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

**SECTION H: DEVICE ID INDEX**

**The following sub-section provides an index  
to the devices that make up the facility  
description sorted by device ID.**

**FACILITY PERMIT TO OPERATE  
 CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

**SECTION H: DEVICE ID INDEX**

Device Index For Section H			
Device ID	Section H Page No.	Process	System
D1	1	1	1
C2	2	1	1
C3	2	1	1
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C7	4	1	2
S8	4	1	2
D11	11	2	0
D16	5	1	3
B17	6	1	3
C18	6	1	3
C19	7	1	3
S21	7	1	3
D22	7	1	4
B23	8	1	4
C24	9	1	4
C25	9	1	4
S27	9	1	4
D28	9	1	5
B29	10	1	5
B30	11	1	5

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

#### **FACILITY CONDITIONS**

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

- (a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or
- (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

#### **DEVICE CONDITIONS**

##### **A. Emission Limits**



## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.1 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 2330 LBS IN ANY ONE MONTH
CO	Less than or equal to 6574 LBS IN ANY ONE MONTH
SOX	Less than or equal to 212 LBS IN ANY ONE MONTH
VOC	Less than or equal to 887 LBS IN ANY ONE MONTH

The operator shall calculate the emission limit(s) based on the emissions from a single turbine. The operator shall calculate the monthly emission limit(s) by using monthly fuel use data, and the following emission factors. PM: 6.93 lb/MMSCF, SOx: 0.6 lb/mm scf, and VOC 2.601 lb/mm scf.

The operator shall calculate the emission limit(s) based on the emissions from a single turbine. Compliance with the CO emission limit shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using monthly fuel usage and the factor of 26.08 lb/mm scf during commissioning, and 6.71 lb/mm scf during normal operations. During commissioning, the CO emissions shall not exceed 9,942 lbs in any one month

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.2 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 7806 LBS IN ANY ONE YEAR
CO	Less than or equal to 21644 LBS IN ANY ONE YEAR
SOX	Less than or equal to 710 LBS IN ANY ONE YEAR
VOC	Less than or equal to 2973 LBS IN ANY ONE YEAR

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from both turbines. The operator shall calculate the annual emissions by using annual fuel use data, and the following emission factors: PM10 6.93 lb/MMSCF; SOx 0.6 lb/mmcf; and VOC 2.601 lb/mmcf..

The operator shall calculate the emission limit(s). Compliance with the CO emission limit shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using annual fuel usage and the emission factor of 26.08 lb/mmcf during commissioning, and 6.71 lb/mmcf during normal operation. The CO emissions shall not exceed 36,702 lbs during a commissioning year.

For the purposes of this condition, the yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.3 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than 450 LBS IN ANY ONE MONTH
CO	Less than 1352 LBS IN ANY ONE MONTH
SOX	Less than 47 LBS IN ANY ONE MONTH
VOC	Less than 215 LBS IN ANY ONE MONTH

For the purposes of this condition, the limit(s) shall be based on the emissions from a single turbine.

The operator shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM10: 6.42 lbs/MMscf, and SOx: 0.67 lbs/MMscf.

Compliance with CO emissions limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and the following factors - 9.41 lbs/MMscf during normal operations and 11.60 lbs/start-up and 10.92 lbs/shutdown.

VOC emissions shall be calculated using fuel usage and the following factors - 2.69 lbs/MMscf during normal operations and 1.49 lb/start-up and 1.41 lb/shutdown.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D16, D22]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.4 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than 7380 LBS IN ANY ONE YEAR
CO	Less than 15768 LBS IN ANY ONE YEAR
SOX	Less than 770 LBS IN ANY ONE YEAR
VOC	Less than 3244 LBS IN ANY ONE YEAR

For the purposes of this condition, limit(s) shall be based on the combined emissions from both turbines.

The operator shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM10: 6.42 lb/MMscf, and SOx: 0.67 lb/MMscf

Compliance with CO emissions limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and the following factors - 9.41 lb/MMscf during normal operations and 11.60 lbs/start-up and 10.92 lbs/shutdown.

VOC emissions shall be calculated using fuel usage and the following factors - 2.69 lbs/MMscf during normal operations and 1.49 lb/start-up and 1.41 lb/shutdown.

The CO emissions shall not exceed 32,474 lbs during a commissioning year and the VOC emissions shall not exceed 3,998 lbs during a commissioning year. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and the factor of 98.84 lbs/MMscf. VOC emissions shall be calculated using fuel usage and the factor of 6.72 lbs/MMscf for turbine operation prior to the installation of the CO oxidation catalyst.

For a month which both commissioning and normal operation takes place, the monthly emissions shall be the total of the commissioning emissions and the normal operation emissions.

For the purposes of this condition, the yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month.

[RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002]

[Devices subject to this condition : D16, D22]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.5 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than 450 LBS IN ANY ONE MONTH
CO	Less than 6924 LBS IN ANY ONE MONTH
SOX	Less than 47 LBS IN ANY ONE MONTH
VOC	Less than 235 LBS IN ANY ONE MONTH

For the purposes of this condition, the limit(s) shall be based on the emissions from a single turbine during a commissioning month, which shall be defined as the month(s) in which the turbine is first installed and commences initial firing and operation to the time that the oxidation catalyst, SCR catalyst, ammonia injection system, and NOx analyzer have been installed and the turbine is ready to supply electrical energy to the power grid. The commissioning period shall not exceed 200 hours.

The turbines shall not operate concurrently until at least one of the two turbines has installed the oxidation catalyst, SCR catalyst, ammonia injection system, and NOx analyzer.

For the purposes of this condition, the maximum number of start-ups during the commissioning month shall not exceed 20 start-ups. The number of start-ups shall begin to be counted and recorded following the installation of the oxidation catalyst.

The operator shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM10: 6.42 lbs/MMscf, and SOx: 0.67 lbs/MMscf.

Compliance with CO emissions limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and the following factors - 9.41 lbs/MMscf during normal operations and 11.60 lbs/start-up and 10.92 lbs/shutdown. For operation during commissioning, CO emissions shall be calculated using fuel usage and the factor of 98.84 lbs/MMscf.

VOC emissions shall be calculated using fuel usage and the following factors - 2.69 lbs/MMscf during normal operations and 1.49 lb/start-up and 1.41 lb/shutdown. For operation prior to the installation of the oxidation catalyst, VOC emissions shall be calculated using fuel usage and the factor of 6.72 lbs/MMscf.

For a month which both commissioning and normal operations take place, the monthly emissions shall be the total of the commissioning emissions and the normal operation emissions.

The District shall be notified in writing once the commissioning process has been completed for each turbine. The notification to the District shall include data and relevant information that demonstrates compliance with this condition.

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D16, D22]

- A99.1 The 2.5 PPM NOX emission limit(s) shall not apply during turbine commissioning, start-up, shutdown, and maintenance periods. The commissioning period shall not exceed 200 hours per turbine. Start-up time shall not exceed 40 minutes for each start-up. Shutdown periods shall not exceed 10 minutes. Maintenance shall not exceed 10 hours per year. Written records of commissioning, start-up, shutdown, and maintenance shall be made available to the Executive Officer upon request.

For the purposes of this condition, maintenance shall be defined as optimizing and re-balancing of the NH3 grid or catalyst modules, and the retuning of the turbine emission control systems.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : D1, D5]

- A99.2 The 6.0 PPM CO emission limit(s) shall not apply during turbine commissioning, start-up, shutdown, and maintenance periods. The commissioning period shall not exceed 200 hours per turbine. Start-up time shall not exceed 40 minutes for each start-up. Shutdown periods shall not exceed 10 minutes. Maintenance shall not exceed 10 hours per year. Written records of commissioning, start-up, shutdown, and maintenance shall be made available to the Executive Officer upon request.

For the purposes of this condition, maintenance shall be defined as optimizing and re-balancing of the NH3 grid or catalyst modules, and the retuning of the turbine emission control systems.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition : D1, D5]

- A99.3 The 17.18 PPM NOX emission limit(s) shall only apply during the interim reporting period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

**[RULE 2012, 12-5-2003]**

[Devices subject to this condition : D1, D5]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- A99.4 The 2.3 PPM NOX emission limit(s) shall not apply during turbine commissioning, start-up, shutdown, and maintenance periods. Start-up time shall not exceed 35 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 20 start-ups per month and 150 start-ups per year. Maintenance shall not exceed 10 hours per year. Written records of commissioning, start-ups, shutdowns and maintenance shall be maintained and made available to the Executive Officer upon request.

For the purposes of this condition, start-up shall be defined as the start up process to bring the turbine and the SCR and ammonia injection system to full successful operation. If during start-up the process is aborted and the start-up is restarted, then the start-up and restart is defined as "one start-up". In this case the start-up time shall not exceed 35 minutes.

For the purposes of this condition, shutdown shall be defined as a reduction in turbine load ending in a period of zero fuel flow.

For the purposes of this condition, maintenance shall be defined as optimizing and re-balancing of the NH3 grid or catalyst modules, and the retuning of the turbine control systems.

The commissioning period shall not exceed 200 hours.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005]

[Devices subject to this condition : D16, D22]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- A99.5 The 4.0 PPM CO emission limit(s) shall not apply during turbine commissioning, start-up, shutdown, and maintenance periods. Start-up time shall not exceed 35 minutes for each start-up. Shutdown periods shall not exceed 10 minutes for each shutdown. The turbine shall be limited to a maximum of 20 start-ups per month and 150 start-ups per year. Maintenance shall not exceed 10 hours per year. Written records of commissioning, start-ups, shutdowns and maintenance shall be maintained and made available to the Executive Officer upon request.

For the purposes of this condition, start-up shall be defined as the start up process to bring the turbine and the SCR and ammonia injection system to full successful operation. If during start-up the process is aborted and the start-up is restarted, then the start-up and restart is defined as "one start-up". In this case the start-up time shall not exceed 35 minutes..

For the purposes of this condition, shutdown shall be defined as a reduction in turbine load ending in a period of zero fuel flow.

For the purposes of this condition, maintenance shall be defined as optimizing and re-balancing of the NH3 grid or catalyst modules, and the retuning of the turbine control systems.

The commissioning period shall not exceed 200 hours.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]**

[Devices subject to this condition : D16, D22]

- A99.6 The 96.66 LBS/MMCF NOX emission limit(s) shall only apply during the interim reporting period during initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

**[RULE 2012, 5-6-2005]**

[Devices subject to this condition : D16, D22]

- A99.7 The 12.50 LBS/MMSCF NOX emission limit(s) shall only apply during the interim reporting period after initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

**[RULE 2012, 5-6-2005]**

[Devices subject to this condition : D16, D22]



## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

A195.1 The 2.5 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[RULE 2005, 4-20-2001]

[Devices subject to this condition : D1, D5]

A195.2 The 6.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5]

A195.3 The 5.0 PPMV NH3 emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

The operator shall calculate and continuously record the NH3 slip concentration using the following:  $\text{NH}_3 \text{ (ppmv)} = [a - b \cdot c / 1\text{EE} + 06] \cdot 1\text{EE} + 06 / b$ , where: a = NH3 injection rate (lb/hr)/17(lb/lb-mol), b = dry exhaust gas flow rate (scf/hr)/385.5 scf/lbmol, c = change in measured NOx across the SCR (ppmvd @ 15% O2).

The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx ppmv accurate to plus/minus 5 percent and calibrated at least once every 12 months.

The operator shall use the method described above or alternate method approved by the Executive Officer.

The ammonia slip calculation procedures described above shall not be used for compliance determination for emission information determination without corroborative data using an approved reference method for the determination of ammonia.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C2, C6]

A195.4 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5, D16, D22]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A195.5 The 4.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O<sub>2</sub>, dry.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988]

[Devices subject to this condition : D16, D22]

A195.6 The 2.3 PPMV NO<sub>x</sub> emission limit(s) is averaged over 60 minutes at 15 percent O<sub>2</sub>, dry.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; **RULE 2005, 5-6-2005**]

[Devices subject to this condition : D16, D22]

A195.7 The 5.0 PPMV NH<sub>3</sub> emission limit(s) is averaged over 60 minutes at 15% O<sub>2</sub>, dry basis.

The operator shall calculate and continuously record the NH<sub>3</sub> slip concentration using the following: NH<sub>3</sub> (ppmv) =  $[a-b*c/1EE+06]*1EE+06/b$ , where: a = NH<sub>3</sub> injection rate (lbs/hr)/17(lb/lb-mol), b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol, c = change in measured NO<sub>x</sub> across the SCR (ppmvd at 15% O<sub>2</sub>).

The operator shall install and maintain a NO<sub>x</sub> analyzer to measure the SCR inlet NO<sub>x</sub> ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months.

The NO<sub>x</sub> analyzer shall be installed and operated within 90 days of initial start up.

The operator shall use the above described method or another alternative method approved by the Executive Officer.

The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information without corroborative data using an approved reference method for the determination of ammonia.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002**]

[Devices subject to this condition : C19, C25]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[RULE 475, 10-8-1976; RULE 475, 8-7-1978]

[Devices subject to this condition : D1, D5, D16, D22]

A433.1 The operator shall comply at all times with the 2.3 ppm 1-hour BACT limit for NO<sub>x</sub>, except as defined in condition A99.4 and for the following scenarios:

Operating Scenario	Maximum Limit	Operational Limit
Start-up	11.02 lb	The mass emission limit is determined over 60 consecutive rolling minutes
Shutdown	6.14 lb	The mass emission limit is determined over 60 consecutive rolling minutes

Records of minute by minute start-up and shutdown data shall be maintained and made available to the Executive Officer upon request.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005]

[Devices subject to this condition : D16, D22]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A433.2 The operator shall at all times with the 4.0 ppm 1-hour BACT limit for CO, except as defined in condition A99.5 and for the following scenarios:

Operating Scenario	Maximum Limit	Operational Limit
Start-up	11.60 lb	The mass emission limit is determined over 60 consecutive rolling minutes
Shutdown	10.92 lb	The mass emission limit is determined over 60 consecutive rolling minutes

Records of minute by minute start-up and shutdown data shall be maintained and made available to the Executive Officer upon request.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988]

[Devices subject to this condition : D16, D22]

### C. Throughput or Operating Parameter Limits

C1.1 The operator shall limit the fuel usage to no more than 339 MM cubic feet in any one calendar month.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of a single turbine.

The operator shall maintain records to demonstrate compliance with this condition and the records shall be made available upon AQMD request.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

C1.2 The operator shall limit the fuel usage to no more than 1136 MM cubic feet per year.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of turbines 1 and 2.

The operator shall maintain records to demonstrate compliance with this condition and the records shall be made available upon AQMD request.

For the purpose of this condition, the yearly fuel usage shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each consecutive month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D5]

C1.3 The operator shall limit the fuel usage to no more than 70 MM cubic feet in any one calendar month.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of a single turbine.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and shall be made available upon request.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D16, D22]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- C1.4 The operator shall limit the fuel usage to no more than 1148 MM cubic feet per year.

For the purpose of this condition, fuel usage shall be defined as the total combined natural gas usage of both turbines.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and shall be made available upon request.

For the purpose of this condition, the yearly fuel usage shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each consecutive month.

[**RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002**]

[Devices subject to this condition : D16, D22]

- C1.5 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

The 200 hours in any one year shall include no more than 50 hours in any one year for maintenance and performance testing and no more than 4.2 hours in any one month for maintenance and performance testing.

[**RULE 1110.2, 2-1-2008; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 6-5-2009; RULE 1470, 6-1-2007; RULE 2012, 5-6-2005**]

[Devices subject to this condition : D28]

- C1.6 The operator shall limit the operating time to no more than 3 hour(s) in any one day.

For the purposes of this condition, the operating time is inclusive of time allotted for maintenance and performance testing.

[**RULE 212, 12-7-1995; RULE 212, 11-14-1997**]

[Devices subject to this condition : D28]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

C157.1 The operator shall install and maintain a pressure relief valve with a minimum pressure set at 25 psig.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D11]

#### **D. Monitoring/Testing Requirements**

D12.1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 2012, 12-5-2003]

[Devices subject to this condition : D1, D5, D16, D22]

D12.2 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001]

[Devices subject to this condition : C2, C6]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- D12.3 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001]**

[Devices subject to this condition : C2, C6]

- D12.4 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2005, 4-20-2001]**

[Devices subject to this condition : C2, C6, C19, C25]

- D12.5 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The ammonia injection system shall be placed in full operation as soon as the minimum temperature is reached. The minimum temperature is listed as 515 degrees F. at the inlet to the SCR reactor

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005]**

[Devices subject to this condition : C19, C25]



## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- D12.6 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

The catalyst temperature range shall remain between 515 degrees F and 870 degrees F. The inlet temperature shall not exceed 870 degrees F.

The temperature range requirement of this condition shall not apply during start-up of the turbine not to exceed 35 minutes and shutdown of the turbine not to exceed 10 minutes.

For the purposes of this condition, start-up shall be defined as the start-up process to bring the turbine to full successful operation and shutdown shall be defined as a reduction in turbine load ending in a period of zero fuel flow.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005**]

[Devices subject to this condition : C19, C25]

- D12.7 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[**RULE 1110.2, 2-1-2008; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 6-5-2009; RULE 1470, 6-1-2007**]

[Devices subject to this condition : D28]

- D12.8 The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the engine.

[**RULE 2012, 5-6-2005**]

[Devices subject to this condition : D28]

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### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
SOX emissions	Approved District method	District-approved averaging time	Fuel sample
VOC	Approved District method	1 hour	Outlet of the SCR serving this equipment
PM emissions	Approved District method	District-approved averaging time	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (cfh) the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing laboratory, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

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The operator shall comply with the terms and conditions set forth below:

approval, except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test methods, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

The test shall be conducted when this equipment is operating at loads of 100, 75, and 50 percent of maximum load.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 2005, 4-20-2001]**

[Devices subject to this condition: D1, D5]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted and the results submitted to the District within 45 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test(s) shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition: D1, D5]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
SOX emissions	Approved District method	District-approved averaging time	Fuel sample
VOC	Approved District method	1 hour	Outlet of the SCR serving this equipment
PM emissions	Approved District method	District-approved averaging time	Outlet of the SCR serving this equipment

The test(s) shall be conducted at least once every three years.

The test shall be conducted and the results submitted to the District within 60 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted in accordance with a District approved source test protocol. The protocol shall be submitted to the District permitting engineer no later than 45 days before the proposed test date and shall be approved by the District before the test commences. The protocol shall include the proposed operating conditions of the turbine during the tests, identity of the testing lab, a statement from the lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted to demonstrate compliance with Rule 1303 concentration emission limits.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output (MW).

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be determined as follows: a) Stack gas samples are extracted into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre-concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval, except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test methods, this alternate

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The operator shall comply with the terms and conditions set forth below:

VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

The test shall be conducted when this equipment is operating at 100 percent load.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition : D1, D5]

## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.4 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
CO emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
SOX emissions	AQMD Laboratory Method 307-91	Not Applicable	Fuel Sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM emissions	District method 5.2	District-approved averaging time	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A	District-approved averaging time	Outlet of the SCR serving this equipment
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at 100, 75, and 50 percent of maximum load.

The test shall be conducted to demonstrate compliance with the PM10 emission factor of 6.42 lb/MMscf. The PM10 shall be sampled by EPA Method 201A and the analysis shall be conducted by EPA method 202 or District method 5.2 or sampled and analyzed by a District Approved Method.

The test shall be conducted to demonstrate compliance with Rules 475 and 409 emission limits for PM. The test for PM shall be conducted by District Method 5.1 or 5.2 or by a District Approved Method.

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The operator shall comply with the terms and conditions set forth below:

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of AQMD, EPA and CARB.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 5-6-2005**]

[Devices subject to this condition: D16, D22]

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### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.5 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted and the results submitted to the District within 45 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test(s) shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 BACT concentration limit.

If the turbine is not in operation during one quarter, then no testing is required during that quarter.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D16, D22]



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The operator shall comply with the terms and conditions set forth below:

D29.6 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
SOX emissions	AQMD Laboratory Method 307-91	Not Applicable	Fuel Sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM emissions	District method 5.2	District-approved averaging time	Outlet of the SCR serving this equipment
PM10 emissions	EPA Method 201A	District-approved averaging time	Outlet of the SCR serving this equipment

The test(s) shall be conducted at least once every three years.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at maximum load.

The test shall be conducted to demonstrate compliance with the PM10 emission factor of 6.42 lb/MMscf. The PM10 shall be sampled by EPA Method 201A and the analysis shall be conducted by EPA method 202 or District method 5.2 or sampled and analyzed by a District Approved Method.

The test shall be conducted to demonstrate compliance with Rules 475 and 409 emission limits for PM. The test for PM shall be conducted by District Method 5.1 or 5.2 or by a District Approved Method.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

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The operator shall comply with the terms and conditions set forth below:

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of AQMD, EPA and CARB.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]**

[Devices subject to this condition : D16, D22]

D82.1 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

The CEMS shall be installed and operated in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD.

The CEMS shall be installed and operated to measure CO concentration over a 15 minute averaging time period

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition.: D1, D5]

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### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

D82.2 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 12 months after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional start-up date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). Within two weeks of the turbine start-up date, the operator shall provide written notification to the AQMD of the exact date of start-up.

The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start-up of the turbine.

**[RULE 2005, 4-20-2001; RULE 2012, 12-5-2003]**

[Devices subject to this condition : D1, D5]

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The operator shall comply with the terms and conditions set forth below:

D82.3 The operator shall install and maintain a CEMS to measure the following parameters:

CO concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operated no later than 90 days after initial start-up of the turbine, and in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD. Within two weeks of the turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operated to measure CO concentrations over a 15 minute averaging time period.

The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) using the equation below and record the hourly emission rates on a continuous basis.

CO Emission Rate, lbs/hr =  $K C_{co} F_d [20.9\% - \%O_2 d] [(Q_g * HHV)/106]$ , where

$K = 7.267 * 10^{-8} \text{ (lb/scf)/ppm}$

$C_{co}$  = Average of four consecutive 15 min. ave. CO concentration, ppm

$F_d$  = 8710 dscf/MMBTU natural gas

$\%O_2 d$  = Hourly ave. % by vol. O2 dry, corresponding to  $C_{co}$

$Q_g$  = Fuel gas usage during the hour, scf/hr

HHV = Gross high heating value of fuel gas, BTU/scf

[**RULE 1303(a)(1)-BACT, 5-10-1996**; **RULE 1303(a)(1)-BACT, 12-6-2002**; **RULE 1303(b)(2)-Offset, 5-10-1996**; **RULE 1303(b)(2)-Offset, 12-6-2002**; **RULE 1703(a)(2) - PSD-BACT, 10-7-1988**; **RULE 218, 8-7-1981**; **RULE 218, 5-14-1999**]

[Devices subject to this condition : D16, D22]

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The operator shall comply with the terms and conditions set forth below:

D82.4 The operator shall install and maintain a CEMS to measure the following parameters:

NOX concentration in ppmv

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operating no later than 90 days after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). Within two weeks of the turbine start-up date, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start up of the turbine.

[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; **RULE 2005, 5-6-2005; RULE 2012, 5-6-2005**]

[Devices subject to this condition : D16, D22]

**E. Equipment Operation/Construction Requirements**

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002**]

[Devices subject to this condition : D11]

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The operator shall comply with the terms and conditions set forth below:

E179.1 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.

Condition Number D 12- 2

Condition Number A 195- 3

Condition Number D 12- 3

Condition Number D 12- 5

Condition Number A 195- 7

Condition Number D 12- 6

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition : C2, C6, C19, C25]

E179.2 For the purpose of the following condition number(s), continuous monitoring shall be defined as measuring at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

Condition Number D 12- 4

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition : C2, C6, C19, C25]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Final California Energy Commission Decision for the 04-SPPE-1 project

**[CA PRC CEQA, 11-23-1970]**

[Devices subject to this condition : D1, D5, D11]

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The operator shall comply with the terms and conditions set forth below:

E193.2 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the final California Energy Commission decision for the 08-SPPE-1 project.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D16, C19, D22, C25]

E193.3 The operator shall operate and maintain this equipment according to the following requirements:

The operation of this engine beyond the 50 hours per allotted for maintenance and performance testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

Engine operation shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

The engine shall be operated for the primary purpose of providing a back-up source of power to start a turbine.

[RULE 1110.2, 2-1-2008; **RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 6-5-2009; RULE 1470, 6-1-2007]

[Devices subject to this condition : D28]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

E193.4 The operator shall operate and maintain this equipment according to the following requirements:

The operator shall operate the diesel particulate filter system only with an operational CRT Diagnostic Module backpressure and temperature data logging and alarm system.

The data logging and alarm system shall be programmed to provide a signal to the operator, whenever the engine backpressure reaches the maximum allowable backpressure of 40 inches of water. The engine backpressure shall not exceed 40 inches of water in operation.

The engine shall be operated at the load level required to achieve an exhaust temperature of 465 deg F (241 deg C) for passive regeneration of the diesel particulate filter for at least 40% of the operating time.

The engine shall not be operated below the passive regeneration temperature of 465 deg F for more than 720 consecutive minutes.

The operator shall regenerate the diesel particulate filter after every 24 cold starts or whenever a signal to the operator indicates the backpressure is 10% below the allowable backpressure of 40 inches of water is received from the alarm system, whichever occurs first. In order to achieve filter regeneration, the operator shall operate the engine at the load required to achieve an exhaust temperature above 465 deg F until the backpressure monitoring system indicates a normal backpressure reading.

The engine shall be shut down and the diesel particulate filter cleaned whenever the backpressure reaches the maximum backpressure limit of 40 inches of water. Cleaning shall be performed according to the manufacturer's recommendations in the installation and maintenance manual.

After every 200 hours of normal engine operation, the operator shall inspect the integrity of the diesel particulate filter and, if necessary, replace it.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition : D28]

### **H. Applicable Rules**



## FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
NOX	40CFR60, SUBPART	KKKK
SOX	40CFR60, SUBPART	KKKK

[40CFR 60 Subpart KKKK, 7-6-2006]

[Devices subject to this condition : D16, D22]

### I. Administrative

I296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall, prior to the 1st compliance year hold a minimum NOx RTCs of 19,810 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the 1st gas turbine (Devices D1)

To comply with this condition, shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of 9,905 lbs of NOx RTCs for operation of all equipment at the facility. In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

[RULE 2005, 4-20-2001]

[Devices subject to this condition : D1]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- I296.2 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall, prior to the 1st compliance year hold a minimum NOx RTCs of 19,810 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the 1st gas turbine (Devices D5)

To comply with this condition, shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of 9,905 lbs of NOx RTCs for operation of all equipment at the facility. In accordance with Rule 2005(f), unused RTCs may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

**[RULE 2005, 4-20-2001]**

[Devices subject to this condition : D5]

- I296.3 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall prior to the 1st compliance year hold a minimum NOx RTCs of 30,086 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the gas turbine.

To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of 13,692 lbs/yr of NOx RTCs for operation of the gas turbine.

In accordance with Rule 2005(f), unused RTC's may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

This condition shall apply to the combined emissions of both turbines.

**[RULE 2005, 5-6-2005]**

[Devices subject to this condition : D16, D22]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

- I296.4 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

To comply with this condition, the operator shall prior to the 1st compliance year hold a minimum NOx RTCs of 2,602 lbs/yr. This condition shall apply during the 1st 12 months of operation, commencing with the initial operation of the blackstart engine.

To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of 2,602 lbs/yr of NOx RTCs for operation of the blackstart engine.

In accordance with Rule 2005(f), unused RTC's may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

[RULE 2005, 5-6-2005]

[Devices subject to this condition : D28]

### **K. Record Keeping/Reporting**

**FACILITY PERMIT TO OPERATE  
CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM Cubic Feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 2005, 4-20-2001]**

[Devices subject to this condition : D1, D5, D16, D22]

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Natural gas fuel use after CEMS certification

Natural gas fuel use during the commissioning period

Natural gas fuel use after the commissioning period and prior to CEMS certification

Natural gas fuel use for devices D16 and D22 commencing from the initial first fire of the turbine to the installation of the CO oxidation catalyst

**[RULE 2012, 12-5-2003]**

[Devices subject to this condition : D1, D5, D16, D22]

## **FACILITY PERMIT TO OPERATE CITY OF RIVERSIDE PUBLIC UTILITIES DEPT**

### **SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

An engine operating log shall be maintained which on a monthly basis shall list all engine operations in each of the following areas:

- A. Emergency use hours of operation,
- B. Maintenance and testing hours, and
- C. Other Operating hours, with a description of the reason for operation.

In addition, each time the engine is started manually, the log shall include the date of operation and the timer readings in hours at the beginning and end of operation. The log shall be kept for a minimum of five calendar years prior to the current year and made available to District personnel upon request. The total hours of operation for the previous calendar year shall be recorded some time during the first 15 days of January each year.

[RULE 1110.2, 2-1-2008; RULE 1470, 6-1-2007]

[Devices subject to this condition : D28]

K67.4 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

The operator shall maintain records of diesel particulate filter inspections, replacements, and cleanings.

The operator shall maintain monthly records of the exhaust temperature, engine backpressure, and date and time for the duty cycle as downloaded from the CRT Diagnostic Module data logging and alarm system.

All records shall be maintained on file for a minimum of five years and made available to District personnel upon request.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D28]



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## ENGINEERING EVALUATION

### COMPANY NAME AND ADDRESS

City of Riverside, Public Utilities Department  
5901 Payton Avenue  
Riverside, CA 92504

CONTACTS: Chuck Casey, Facility Manager, (951) 710-5010  
Karl Lany, Consultant, (714) 282-8240

### EQUIPMENT LOCATION

AQMD ID 139796  
City of Riverside, Public Utilities Department  
5901 Payton Avenue  
Riverside, CA 92504

### EQUIPMENT DESCRIPTION

Section H of the facility permit: Permit to Construct and temporary Permit to Operate

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
<b>System 5: EMERGENCY IC ENGINE</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, CATERPILLAR, MODEL C32 DITA, WITH AFTERCOOLER, TURBOCHARGER, 1502 BHP A/N 482515	D28		NOX: PROCESS UNIT	<b>CO:</b> 2.6 G/BHP-HR (4) [RULE 1703 - BACT]; <b>CO:</b> 2.6 G/BHP-HR (8) [40 CFR 60 SUBPART III]; <b>CO:</b> 2.6 G/BHP-HR (5) [RULE 1470]  <b>NOX:</b> 175 LBS/1000 GAL DIESEL (1) [RULE 2012]  <b>NOX+HC:</b> 4.8 G/BHP-HR (4) [RULE 1303 - BACT]; [RULE 1703 - BACT]; <b>NOX+HC:</b> 4.8 G/BHP-HR (8) [40 CFR 60 SUBPART III]; <b>NOX+HC:</b> 4.8 G/BHP-HR (5) [RULE 1470]  <b>PM:</b> 0.15 G/BHP-HR (4) [RULE 1303 - BACT]; <b>PM:</b> 0.15 G/BHP-HR (8) [40 CFR 60 SUBPART III]; <b>PM:</b> 0.15 G/BHP-HR (5) [RULE 1470]	C1.5, C1.6, D12.7, D12.8, E193.3, E193.4, I296.4, K67.3, K67.4
FILTER, DIESEL PARTICULATE, JOHNSON MATTHEY, MODEL CRT WITH BACKPRESSURE AND TEMPERATURE DATA LOGGING AND ALARM SYSTEM	B29				
GENERATOR, 1000 KW	B30				

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## **BACKGROUND**

City of Riverside, Public Utilities Department was issued a Permit to Construct, on 6/19/09, two (2) two simple cycle gas turbines each venting to a SCR/CO oxidation catalyst for their existing Riverside Energy Resource Center (RERC) facility, owned and operated by the Riverside Public Utilities (RPU), at 5901 Payton Avenue in Riverside.

This project involves the addition of a diesel black start engine. RERC had initially proposed a Cummins engine for A/N 482515 – that was submitted along with the applications for the turbines and air pollution control equipment. However, RERC had some problems with the equipment vendor and as a result has had to put the delivery of the engine back out to bid. So the Title V permit that was issued for the new turbines did not include the blackstart engine. RERC submitted an application, A/N 499907, to amend the Title V/RECLAIM permit that included an addendum to change the make and model of the engine from Cummins to Caterpillar. The package also included the specifications for a diesel particulate filter and back pressure and temperature monitoring device.

The facility is a Title V facility and major source for NOx. Therefore, prior to issuance of the permit, the project must go through a 45-day EPA review period.

## **APPLICATIONS**

RERC submitted two applications which are summarized in table 1.

**Table 1 Application Summary**

A/N	Equipment	Submittal Date	Deemed Complete	BCAT/CCAT	Schedule	Base Fee	XPP Fee	Total Filing Fees
482515	Emergency Engine	5/14/2008	5/21/2008	43902	B	\$1,865.02	\$932.51	\$2,797.53
499907	TV/RECLAIM Amendment	6/19/09	10/27/09	555009	-	\$1,687.63	-	\$1,687.63
Total								<b>\$4,485.16</b>

<sup>(a)</sup> Application remained pending until RERC submitted specifications for a diesel particulate filter.

## **COMPLIANCE REVIEW**

The facility was inspected on 9/3/09 for a routine inspection and to complete the 2008 RECLAIM audit. A Notice of Violation (P53110) was issued for late submittal of third quarter RECLAIM Quarterly Certification of Emissions Report. Refer to application package for a copy of the Inspector's report and the NOV.

## **PROCESS DESCRIPTION**

Gas turbines include ignition circuits and control systems that require electrical power in order to operate. In some circumstances, it may be necessary to start the turbines without an external source of power. For a peaker plant, in which the turbines are operating intermittently, power is provided from the grid through the facility's transmission line. However, during an area outage, external power supply through the grid would not be available, so "black start" needs to be performed to start a turbine generator. Diesel generators are often selected as black start engines due to robustness and



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dependability to start the larger turbine generators. The engine will operate 50 hours per year for testing and maintenance and no more than 200 hours per year for emergency and testing purposes.

The blackstart engine will be equipped with a diesel particulate filter. The equipment specifications are shown in Tables 2 and 3.

**Table 2 Diesel Engine Specifications**

Parameter	Value
Make	Caterpillar
Model	C32 DITA
Rating	1502 bhp @ 1800 rpm
Aspiration	Turbocharged and Aftercooled
Tier	2
ARB Executive Order	U-R-001-0331-1
Generator Rating	1000 kW
Exhaust Flow Rate	8,129 acfm
Exhaust Temperature	893°F
Fuel Rate	74.3 gal/hr
Maximum Allowable Backpressure	40.2 in. water

**Table 3 Diesel Particulate Filter Specifications**

Parameter	Value
Make	Johnson Matthey
Model	CRT®
Type	Passive
ARB Verification Executive Order	DE-08-009
ARB Verified PM Reduction	85%
Backpressure & Temperature Monitor	CRT® Diagnostic Module (CRTdm)
Minimum Regeneration Temperature	465°F for 40% of run time
Maximum Minutes below Regeneration Temperature	720 minutes
No. of Consecutive Cold Starts before Regeneration	24
Catalyst Pressure Loss Expected	23.5 in. water

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## **EMISSION CALCULATIONS**

**Table 4 Data for Diesel Engine**

Parameter	Value	Unit	Source
Rating	1502	bhp	Manufacturer
Schedule	4.2	hrs/mo	Applicant
	50	hrs/yr	
NOx	3.93	g/bhp-hr	Manufacturer, ARB EO
SOx	0.0049	g/bhp-hr	Mass balance – 15 ppm-S diesel
PM	0.10	g/bhp-hr	Manufacturer, ARB EO
PM (with DPF)	0.015	g/bhp-hr	DPF manufacturer – 85% Reduction
CO	1.19	g/bhp-hr	Manufacturer, ARB EO
ROG	0.10	g/bhp-hr	Manufacturer, ARB EO

**Table 5 Engine Mass Emission Rates**

Pollutant	lb/hr <sup>(a)</sup>	lb/day <sup>(b)</sup>	lb/yr <sup>(c)</sup>	30-Day <sup>(d)</sup>
NOx	13.01	13.01	651	n/a
SOx	0.02	0.02	1	0.00
PM10	0.05	0.05	2	0.01
CO	3.94	3.94	197	n/a
VOC	0.33	0.33	17	0.05

<sup>(a)</sup> Emission Rate (lb/hr) = Engine Rating (bhp) x EF (g/bhp-hr) ÷ 453.6 g/lb

<sup>(b)</sup> Emission Rate (lb/day) = Emission Rate (lb/hr) x 1 hr/day

<sup>(c)</sup> Emission Rate (lb/yr) = Rate (lb/hr) x Testing Schedule (hrs/yr)

<sup>(d)</sup> 30-Day = Rate (lb/hr) x Testing Schedule (hrs/mo)

<sup>(e)</sup> PM assumed to be all PM10

## **RULES EVALUATION**

### **RULE 212-STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES**

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million ( $1 \times 10^6$ ) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million ( $10 \times 10^6$ ) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million ( $10 \times 10^6$ ) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

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#### FACILITY / EQUIPMENT AND SCHOOL LOCATIONS

The closest kindergarten to grade 12 school located near the facility is 1.0 mile away as determined by Google Maps (<http://maps.google.com/maps>). Table 6 summarizes name, location and proximity of the nearby schools.

**Table 6 K-12 Schools Near RERC Facility**

Name of School	Address	Approximate Distance in miles (ft)
Indian Hills Elementary School	7750 Linares Ave., Riverside, CA	1.0 (5,280)
Terrace Elementary School	6601 Rutland Ave., Riverside, CA	1.1 (5,808)
Kinder Care	7920 Limonite Ave. #G, Riverside, CA	1.2 (6,336)
Norte Vista High School	6585 Crest Ave., Riverside, CA	1.3 (6,864)
Harvest Christian School	6115 Arlington Ave., Riverside, CA	1.5 (7,920)
Arlanza Elementary School	5891 Rutland Ave., Riverside, CA	1.6 (8,448)
Adams Elementary School	8362 Colorado Ave., Riverside, CA	1.6 (8,448)
Foothill Elementary School	8230 Wells Ave., Riverside, CA	1.9 (10,032)

Therefore, since the facility is not located within 1,000 feet of a K-12 school, a public notice is not required for section (c)(1).

#### DAILY EMISSIONS

The daily emissions from this engine do not exceed the daily thresholds of Rule 212(g) for any pollutant, provided the engine does not operate more than **3 hours per day** for testing, maintenance or commissioning purposes; therefore, a public notice will not be required for section (c)(2).

#### MAXIMUM INDIVIDUAL CANCER RISK (MICR)

The MICR is less than  $1 \times 10^{-6}$ , as shown in the calculations in the project file; therefore, a public notice is not required for section (c)(3).

#### RULE 401 - VISIBLE EMISSIONS

This rule limits visible emissions to an opacity of less than 20 percent (Ringlemann No.1), as published by the United States Bureau of Mines. It is unlikely, with the use of the SCR /CO catalyst configuration on natural gas turbines that there will be visible emissions. However, in the unlikely event that visible emissions do occur, anything greater than 20 percent opacity is not expected to last for greater than 3 minutes. During normal operation, no visible emissions are expected. Therefore, based on the above and on experience with other diesel engines equipped with particulate filters, compliance with this rule is expected.

#### RULE 402 - NUISANCE

This rule requires that a person not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The engine is not expected to create a public nuisance based on experience with identical diesel engines conditioned to operate during emergencies or for limited time periods for testing and maintenance. Therefore, compliance with Rule 402 is expected.

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#### RULE 431.2-SULFUR CONTENT OF LIQUID FUELS

The engine will use diesel fuel that has a sulfur content of less than 15 ppm by weight. The permit will be conditioned to comply with the requirements of this rule. Therefore, compliance is expected.

#### NEW SOURCE REVIEW (NSR)

#### RULE 1303(a), RULE 2005(b)(1)(A) & Rule 1703 (a)(2) – BACT FOR EMERGENCY COMPRESSION IGNITED ENGINES

These rules state that the Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. The addition of the new equipment at this existing facility will result in an increase in emissions; therefore, BACT requirements are applicable.

Table 7 summarizes the BACT requirements for engines rated greater than or equal to 750 bhp and the emission limits of the engine proposed by RERC.

**Table 7 BACT Requirements for Emergency Compression Ignited Engines  $\geq$  750 bhp**

Pollutant	BACT	RERC Proposal	Complies?
NOx + HC	4.8	4.03	Yes
CO	2.6	1.19	Yes
PM	0.15	0.015	Yes
SOx	Diesel fuel sulfur content $\leq$ 0.0015%	Diesel fuel sulfur content $\leq$ 0.0015%	Yes

The facility is a major source for NOx and is subject to LAER. For this type of equipment, LAER requirements are the same as the BACT requirements in Table 8, with the exception of PM. A black start diesel engine was permitted for Mountain View Power (A/N 438716) with a DPF; therefore, a DPF represents LAER for this type of equipment. RERC proposed a Johnson Matthey passive DPF (refer to Table 3 for specifications) which will satisfy LAER requirements for this engine.

#### RULE 1303(b)(1) & RULE 2005(b)(1)(B) - MODELING

Modeling is not required for emergency engines; therefore, the requirements of these rules are not applicable.

#### RULE 1303(b)(2) & RULE 2005(b)(2) –OFFSETS AND RECLAIM TRADING CREDITS

RERC is a RECLAIM facility and will be required to offset NOx increases with RECLAIM Trading Credits (RTCs) at a 1 to 1 ratio. The required RTCs for this engine are as follows:

$$13.01 \text{ lb/hr} \times 200 \text{ hrs/yr} = 2,602 \text{ lb-RTCs}$$

For Non-RECLAIM pollutants, the District is still under a moratorium from issuing permits with emission increases exceeding 0.5 lb/day on a 30 day average, unless external offsets can be provided. The 30 day average emissions for the engine are summarized in Table 8.

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**Table 8 30 Day Emission Rates and Offset Applicability**

Pollutant	30 - DA <sup>(a)</sup>	Threshold (lb/day)	External Offsets Triggered?
NOx	n/a	0.5	No
SOx	0.00	0.5	No
PM10	0.01	0.5	No
CO	n/a	n/a	n/a
VOC	0.05	0.5	No

<sup>(a)</sup> The 30 day emission rates are taken from Table 5.

As shown in Table 8, the 30 day emission rates are below the moratorium threshold of 0.5 lb/day; therefore, external offsets are not required. **To ensure offsets are not triggered a monthly limit to not exceed 4.2 hours of operation for testing and maintenance will be put on the permit.** Compliance is expected.

#### RULES 1303(b)(3) – SENSITIVE ZONE REQUIREMENTS & 2005(e) – TRADING ZONE RESTRICTIONS

Both rules state that credits must be obtained from the appropriate trading zone. In the case of Rule 1303(b)(3), unless credits are obtained from the Priority Reserve, facilities located in the South Coast Air Basin are subject to the Sensitive Zone requirements specified in Health & Safety Code Section 40410.5. The RERC facility is located in Riverside (zone 2A) and is therefore eligible to obtain its ERCs from either Zone 1 or Zone 2a; however, it has been determined that no ERCs are required for this equipment. Similarly in the case of Rule 2005(e), because of the facility location, RTCs from either Zone 1 or Zone 2, may be acquired. Compliance is expected with both rules.

#### RULE 1303(b)(4) – FACILITY COMPLIANCE

RPU has submitted documentation stating that the RERC facility is in compliance with all applicable Rules and Regulations of the AQMD.

#### RULE 1303(b)(5) – MAJOR POLLUTING FACILITIES

##### RULE 1303(b)(5)(A) – ALTERNATIVE ANALYSIS

The applicant is required to conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for the facility and to demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with this project. RERC has performed a comparative evaluation of alternative sites as part of the SPPE process and has determined that expanding the current facility is the best option as opposed to developing other sites.

##### RULE 1303(b)(5)(B) – STATEWIDE COMPLIANCE

RPU has submitted documentation, dated 7/8/08 that “any and all facilities that RPU owns or operates in the State of California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act. Therefore, compliance is expected.

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#### **RULE 1303(b)(5)(C) – PROTECTION OF VISIBILITY**

Modeling analysis for plume visibility in accordance with Appendix B of Rule 1303 is required if the net increase in emissions from the new or modified source exceeds 15 tons per year of PM10 or 40 tons per-year of NOx (NOx is covered under Rule 2005(g)(4)) and if it is within the distance specified in Table C-1, of the rule, from a specified Federal Class I area. The increase in PM10 is less than the thresholds of this section; therefore, no further analysis is required.

#### **RULE 1303(b)(5)(D) – COMPLIANCE THROUGH CEQA**

The California Energy Commission's (CEC) Small Power Plant Exemption (SPPE) process is equivalent to CEQA, with the CEC acting as the Lead Agency. The CEC granted the SPPE to RERC on 2/25/09; therefore, CEQA requirements have been met for this facility.

#### **RULE 1401 – NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS**

Emergency internal combustion engines are exempt from this rule pursuant to (g)(1)(F). Therefore, the requirements of this rule are not applicable.

#### **RULE 1470 – REQUIREMENTS FOR STATIONARY DIESEL-FUELED INTERNAL COMBUSTION AND OTHER COMPRESSION IGNITION ENGINES.**

The engine proposed is emergency compression ignited; therefore, the requirements of this rule are applicable. The engine will have a PM emission rate less than 0.15 g/bhp-hr and meet the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423) for the model year and maximum rated power, which is tier 2 for engines rated  $\geq 750$  bhp. The engine will be installed with non-resettable hour meter. The facility will be required to maintain applicable reporting, recordkeeping, and monitoring requirements for the emergency engines.

Therefore, compliance with Rule 1470 is expected for the new engine.

#### **RULE 1472 - REQUIREMENTS FOR FACILITIES WITH MULTIPLE STATIONARY EMERGENCY STANDBY DIESEL-FUELED INTERNAL COMBUSTION**

The purpose of the rule is to reduce diesel PM emissions from facilities with three or more stationary emergency standby diesel-fueled internal combustion engines. There is only emergency standby diesel-fueled internal combustion engine at this facility; therefore, the requirements of this rule are not applicable.

#### **RULE 2005(g) – ADDITIONAL REQUIREMENTS**

As with Rule 1303(b)(5) for the Non-RECLAIM pollutants, RERC has addressed the alternative analysis, statewide compliance, protection of visibility, and CEQA compliance requirements of this rule for NOx. These requirements are essentially the same as those found in Rule 1303(b)(5), subparts A through D for non-RECLAIM pollutants, and are summarized below.

#### **RULE 2005(g)(1) – STATEWIDE COMPLIANCE**

RPU has submitted documentation, dated 7/8/08 that "any and all facilities that RPU owns or operates in the State of California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act. Therefore, compliance is expected.

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#### RULE 2005(g)(2) – ALTERNATIVE ANALYSIS

The applicant is required to conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for the facility and to demonstrate that the benefits of the proposed project outweigh the environmental and social costs associated with this project. RERC has performed a comparative evaluation of alternative sites, as part of the SSPE process and has determined that expanding the current facility is the best option as opposed to developing other sites.

#### RULE 2005(g)(3) – COMPLIANCE THROUGH CEQA

The California Energy Commission's (CEC) Small Power Plant Exemption (SPPE) process is equivalent to CEQA, with the CEC acting as the Lead Agency. The CEC granted the SPPE to RERC on 2/25/09; therefore, CEQA requirements have been met for this facility.

#### RULE 2005(g)(4) – PROTECTION OF VISIBILITY

Modeling analysis for plume visibility in accordance with Appendix B of Rule 2005 is required if the net increase in emissions from the new or modified source exceeds 40 tons per year of NOx and if it is within the distance specified in Table C-1, of the rule, from a specified Federal Class I area. The increase in NOx emissions associated with this engine is less than the thresholds of this section; therefore, no further analysis is required.

#### RULE 2012 – RECLAIM, MONITORING, REPORTING, & RECORDKEEPING REQUIREMENTS

The engine is classified as a NOx process unit and will be required to install a fuel or time meter and will report emissions with an emission factor in lb/mgal or lb/qtr. RERC indicated that a fuel meter will be used for emission monitoring. Therefore, the following emission factor will be used to report emissions from this unit:

$$13.01 \text{ lb-NOx/hr} \div 0.0743 \text{ mgal/hr} = 175 \text{ lb-NOx/mgal}$$

#### REGULATION XVII – PREVENTION OF SIGNIFICANT DETERIORATION

This regulation sets forth preconstruction review requirements for stationary sources to ensure that air quality in clean air areas does not significantly deteriorate while maintaining a margin for future industrial growth. Rule 1701(b) establishes the following applicability of this regulation:

- Any new source or modification to an existing source where the emission increase is 100 or 250 tons per year (depending on source category), or
- Any significant emissions increase at an existing major stationary source, or
- Any net emission increase at a major stationary source located within 10 km of a Class I area.

Rule 1702(m)(1) identifies the source categories subject to prevention of significant deterioration (PSD) and any facility identified as such that has an emission rate of 100 tons per year or more of any contaminant regulated by this act is considered a major stationary source. The black start engine is not listed in this section and therefore falls into section (m)(2); unlisted sources that have a potential to emit 250 tons per year of any contaminant. However, the emissions from this engine will not exceed this threshold; therefore, PSD analysis will not be required.

Rule 1703(a)(2) requires BACT for any net emission increase at any stationary source. As discussed under the NSR section, BACT will be achieved for all pollutants. Compliance is expected.

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#### CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

RERC filed an Application for SPPE (Docket 08-SPPE-1) with the CEC for the project on 3/19/08. As a result, the CEC was the lead agency on this project. Under the SPPE process, the CEC may exempt thermal power plants with a generating capacity not exceeding 100 MW from traditional CEC licensing procedures if the project has no substantial adverse impact on the environment or energy resources. The CEC determined on 6/5/08 that the project could still be considered under the SPPE process, taking into account that the addition of units 3 & 4 will add an additional 96 MW to the existing 95 MW. They determined that there was no way the City of Riverside could predict when additional capacity was warranted back when the City applied for a SPPE for units 1 & 2 in 2004.

The CEC coordinates its review of the project with the federal, state, and local agencies that will be issuing permits to ensure that its SPPE incorporates the conditions that would be required by these various agencies. The SPPE process is the functional equivalent of a traditional CEQA review and will address and resolve issues related to CEQA. Following public review and participation, a Mitigated Negative Declaration (MND) was prepared for the project and the SPPE was approved by the CEC on 2/25/09.

#### 40 CFR PART 60 SUBPART IIII – STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition internal combustion engines. The requirements of this subpart are applicable to the engine proposed by RERC.

§60.4204(b) The engine proposed is tier 2 which meets the emission standards of this subpart for engines rated greater than or equal to 750 bhp model year 2009.

§60.4207(a),(b) The engine will use diesel fuel with a sulfur content less than 0.0015% by weight as required by AQMD Rule 431.2.

§60.4209(a) The proposed engine will have a non-resettable time meter.

§60.4211(a) The engine will be operated and maintained in accordance with the manufacturer's specifications.

§60.4211(e) The engine will be conditioned to operate less than 50 hours per year for testing and maintenance purposes, which is less than the 100 hrs per year allowed by this paragraph.

§60.4214(b) RERC will be required to keep records of engine operation for emergency and non-emergency use as recorded by the time meter. The time and reason for operation will be recorded.

Compliance with this subpart is expected.

#### 40 CFR PART 64 – COMPLIANCE ASSURANCE MONITORING

The CAM regulation applies to each pollutant specific emissions unit (PSEU) at major stationary sources required to obtain a Title V permit, which use control equipment to achieve a specified emission limit. The rule is intended to provide "reasonable assurance" that the control systems are operating properly to maintain compliance with the emission limits.



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CAM applicability is based on specific criteria; the PSEU must:

- be subject to an emission limitation or standard, and
- use a control device to achieve compliance, and
- have **potential pre-control** emissions that exceed or are equivalent to the major source threshold.

The emergency engine does not meet the criteria for CAM applicability; therefore, the requirements do not comply.

#### 40 CFR PART 72 – ACID RAIN PROVISIONS

The RERC facility is subject to the requirements of the federal Acid Rain program. The program is similar in concept to RECLAIM in that facilities are required to cover SO<sub>2</sub> emissions with SO<sub>2</sub> allowances; analogous to NO<sub>x</sub> RTCs. SO<sub>2</sub> allowances are however, not required in any year when the unit emits less than 1,000 lbs of SO<sub>2</sub>. Facilities with insufficient allowances are required to purchase SO<sub>2</sub> credits on the open market. In addition, both NO<sub>x</sub> and SO<sub>2</sub> emissions will be monitored and reported directly to USEPA. Appropriate conditions are in Appendix B of the Title V permit. RERC is expected to comply with this regulation.

#### RULE 3003 – APPLICATIONS

The “de minimis significant permit revision” is expected to comply with all applicable requirements of this rule and pursuant to paragraph (i)(4) it will be issued only after the permit revision application has been found to comply with all conditions of this rule. Paragraph (j)(1) requires that the permit revision be forwarded to EPA for a 45 day review period.

#### RULE 3005 – PERMIT REVISION

The proposed Title V permit revision satisfies all the applicable conditions listed in this rule. The modification constitutes a “de minimis significant permit revision” as defined in Rule 3000(b)(6).

#### RULE 3006 – PUBLIC PARTICIPATION

The proposed “de minimis significant permit revision” is exempt from public participation.

#### RECOMMENDATION(S)

Following the EPA 45-day review period, issue a Facility Permit to Construct with the following permit conditions.

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## **PERMIT CONDITIONS**

### **FACILITY PERMIT CONDITIONS**

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-09-2001]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2]

### **A/N 482515 EMERGENCY IC ENGINE**

C1.5 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

The 200 hours in any one year shall include no more than 50 hours in any one year for maintenance and performance testing and no more than 4.2 hours in any one month for maintenance and performance testing.

[Rule 1110.2, Rule 1303(b)(2)-Offset, Rule 1401, Rule 1470, Rule 2012]

C1.6 The operator shall limit the operating time to no more than 3 hour(s) in any day.

For the purposes of this condition, the operating time is inclusive of time allotted for maintenance and performance testing.

[Rule 212]

D12.7 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[Rule 1110.2, Rule 1303(b)(2)-Offset, Rule 1401, Rule 1470]

D12.8 The operator shall install and maintain a(n) non-resettable totalizing flow meter to accurately indicate the fuel usage of the engine.

[Rule 2012]

E193.3 The operator shall operate and maintain this equipment according to the following requirements:

The operation of this engine beyond the 50 hours per allotted for maintenance and performance testing shall be allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage, provided that the utility distribution company has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a utility service block that is subject to the rotating outage.

Engine operation shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

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The engine shall be operated for the primary purpose of providing a back-up source of power to start a turbine.

[Rule 1110.2, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offset, Rule 1401, Rule 1470]

E193.4 The operator shall operate and maintain this equipment according to the following requirements:

The operator shall operate the diesel particulate filter system only with an operational CRT Diagnostic Module backpressure and temperature data logging and alarm system.

The data logging and alarm system shall be programmed to provide a signal to the operator, whenever the engine backpressure reaches the maximum allowable backpressure of 40 inches of water. The engine backpressure shall not exceed 40 inches of water in operation.

The engine shall be operated at the load level required to achieve an exhaust temperature of 465 deg F (241 deg C) for passive regeneration of the diesel particulate filter for at least 40% of the operating time.

The engine shall not be operated below the passive regeneration temperature of 465 deg F for more than 720 consecutive minutes.

The operator shall regenerate the diesel particulate filter after every 24 cold starts or whenever a signal to the operator indicates the backpressure is 10% below the allowable backpressure of 40 inches of water is received from the alarm system, whichever occurs first. In order to achieve filter regeneration, the operator shall operate the engine at the load required to achieve an exhaust temperature above 465 deg F until the backpressure monitoring system indicates a normal backpressure reading.

The engine shall be shut down and the diesel particulate filter cleaned whenever the backpressure reaches the maximum backpressure limit of 40 inches of water. Cleaning shall be performed according to the manufacturer's recommendations in the installation and maintenance manual.

After every 200 hours of normal engine operation, the operator shall inspect the integrity of the diesel particulate filter and, if necessary, replace it.

[Rule 1303(a)(1)-BACT]

1296.4 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility holds sufficient RTCs in an amount equal to the annual emission increase.

To comply with this condition, the operator shall prior to the 1<sup>st</sup> compliance year hold a minimum NOx RTCs of 2,602 lbs/yr. This condition shall apply during the 1<sup>st</sup> 12 months of operation, commencing with the initial operation of the blackstart engine.

To comply with this condition, the operator shall, prior to the beginning of all years subsequent to the 1<sup>st</sup> compliance year, hold a minimum of 2,602 lbs/yr of NOx RTCs for operation of the blackstart engine.

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In accordance with Rule 2005(f), unused RTC's may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1<sup>st</sup> compliance year.

[Rule 2005]

K67.3 The operator shall keep records, in manner approved by the District, for the following parameter(s) or item(s):

An engine operating log shall be maintained which on a monthly basis shall list all engine operations in each of the following areas:

- A. Emergency use hours of operation,
- B. Maintenance and testing hours, and
- C. Other Operating hours, with a description of the reason for operation.

In addition, each time the engine is started manually, the log shall include the date of operation and the timer readings in hours at the beginning and end of operation. The log shall be kept for a minimum of five calendar years prior to the current year and made available to District personnel upon request. The total hours of operation for the previous calendar year shall be recorded some time during the first 15 days of January each year.

[Rule 1110.2, Rule 1470]

K67.4 The operator shall keep records, in manner approved by the District, for the following parameter(s) or item(s):

The operator shall maintain records of diesel particulate filter inspections, replacements, and cleanings.

The operator shall maintain monthly records of the exhaust temperature, engine backpressure, and date and time for the duty cycle as downloaded from the CRT Diagnostic Module data logging and alarm system.

All records shall be maintained on file for a minimum of five years and made available to District personnel upon request.

[Rule 1303(a)(1)-BACT]